REMARKS

This application contains claims 35-62. Claims 35, 59 and 62 have been amended. No new matter has been introduced. Reconsideration is respectfully requested.

Applicant thanks Examiners Thai and Wong for the courtesy of a personal interview with Applicant's representative, Sanford T. Colb (Reg. No. 26,856), held in the USPTO on June 15, 2006. At the interview, Mr. Colb pointed out that claims 35-62, which are currently pending, were submitted in a preliminary amendment at the time of filing of this application. It was noted that the Examiner evidently overlooked the preliminary amendment and instead examined original claims 1-34 from the parent application (now U.S. Patent 6,636,848), which had been canceled in the preliminary amendment in this application. (The preliminary amendment appears in the application file on PAIR.) Mr. Colb also pointed out differences between the language of new claims 35 and 49 and the original claims 1 and 15, and explained the distinction of the new claims over the cited art in terms of these differences. The Examiners agreed to reconsider the grounds of rejection after submission of a formal response.

In the present Official Action, claims 30-34 were objected to because the Examiner considered it to be unclear where the preamble ends and the body of the claim begins. These claims have been canceled, and this objection is therefore moot. Applicant has amended corresponding claims 59 and 62, however, in order to clarify where the preamble ends and the body of the claim begins.

Claims 18-20, 29 and 34 were rejected for nonstatutory double patenting over claims 1-3 and 5 of U.S. Patent 6,636,848. In view of the cancellation of these claims, this rejection is now moot. Applicant notes, furthermore, that there are no claims in the present application that correspond to original independent claims 18, 29 and 34.

Claims 1, 2, 4-9, 11, 13, 14, 21, 23-26 and 30-31 were rejected under 35 U.S.C. 102(b) over Liddy et al. (U.S. 6,304,864), while claims 3, 10, 12, 15-17, 22, 27, 28, 32 and 33 were rejected under 35 U.S.C. 103(a) over Liddy, taken alone or in view of Wical (U.S. 6,038,560) and, with respect to some of the claims, further in view of Bowman et al. (U.S.

6,006,225). In view of the cancellation of claims 1-34 by preliminary amendment prior to the date of the present Official Action, this rejection is moot.

Although the Examiner did not cite any grounds of rejection against the claims that are actually pending in this application, Applicant will now point out the distinction of the invention over the cited art for the sake of expediting prosecution.

Liddy describes a system for retrieving multimedia information from a network using multiple evolving intelligent agents. The system accepts input information defining a user search profile, including a natural language query, media type and starting network addresses. Crawler agents and meta-search agents retrieve documents from the network based on the user profile (col. 3, lines 45-50). An agent server establishes a neural network, based on the query and on subject categories that are derived from the query by a natural language processor, and embeds the neural network in each of the agents (col. 3, line 64 – col. 4, line 3). The agent server periodically adds inputs to the neural network based on selected relevant documents found in the search and retrains the neural network using these documents (col. 4, lines 20-27). The agents continue to search and evolve in this matter, with respect to the original query, until the process is stopped by the user (col. 4, line 59).

Claim 35 recites a method for searching a corpus of documents in which a knowledge agent uses information gathered in the course of searching a first query to build a set of reference documents for use in searching a second, substantially different query. In other words, the knowledge agent builds specialization in a given knowledge domain, which it can use and refine over the course of multiple, different queries within the domain. (This feature of the present invention is described in the specification on page 6, line 21, through page 7, line 4, and on page 20, lines 11-21.) As the user performs more and more searches, the knowledge agent becomes increasingly specialized in the domain of interest. There is no inherent limitation on the variety of different queries that may be put to a knowledge agent in a given domain.

Liddy, unlike the present invention, is concerned solely with finding information in response to a single query, and relates exclusively to training and evolution of agents in the course of searching this particular query. The retraining of Liddy's neural network and the concomitant evolution of her agents are all built around finding ever-more-relevant answers to the same user query. Liddy provides no teaching or suggestion as to how an agent, which evolved in response to a certain query, could be modified or adapted in order to deal with a second query, "which is substantially different from the first query," as required by claim 35. Indeed, it is questionable whether it would be practical, or even possible, to use a neural network that was trained on one query to answer another, substantially different query.

This interpretation is reinforced by Liddy's abstract, which refers only to a single query, and makes no mention of subsequent queries, even when relating to development and refinement of agents over time: "Periodically, the artificial neural network of the first and second agents is expanded and retrained by the agent server in accordance with the selected relevant documents to improve their ability to retrieve documents which may be relevant to *the query*" (Abstract, lines 29-33, emphasis added). The process of training and evolution of agents that Liddy describes takes place entirely in the course of searching a single query.

This point is actually emphasized by another passage from Liddy (col. 2, line 66, through col. 3, line 4) that was cited by the Examiner in the parent application: "It is thus desirable to provide a system which allows a user... to retrieve desired information on the WWW from their computer by combining the search capability of Web crawling with the meta-searching of multiple Web search engines using agents which learn and evolve *as the search progresses*" (emphasis added). In other words, the learning and evolution that Liddy's agents undergo takes place in the course of a single search. Applicant has studied Liddy very thoroughly and has not found any explicit mention or even a clear hint in Liddy of a second query as recited in claim 35. Liddy provides no teaching or suggestion as to how an agent, which evolved in response to a certain query, might be modified or adapted

in order to deal with a second query, "which is substantially different from the first query," as required by the claims in the present patent application. Such teaching is provided only by the present patent application.

Thus, Applicant respectfully submits that claim 35 is patentable over Liddy. By similar reasoning, independent claims 51 and 59, which recite apparatus and a computer software product operating on principles similar to those of claim 35, are believed to be patentable, as well. In view of the patentability of these independent claims, dependent claims 36-48, 52-57, 60 and 61 are also believed to be patentable.

Claim 49 recites a method for searching a corpus of documents. The method includes finding "lexical affinities" of the terms in a set of reference documents. These lexical affinities are explicitly defined as comprising "other terms that co-occur with the given term in sentences in the reference documents, such that the other terms are separated from the given term in the sentences by no more than a predetermined number of words." The lexical affinities are used in refining a search query in order to search the corpus.

Neither Liddy nor Wical makes any suggestion of using lexical affinities – as defined explicitly in claim 49 – in refining a search query. In rejecting claim 15 in this Official Action, the Examiner maintained that Wical teaches "refining the search query using the lexical characteristics" in col. 6, lines 62 – col. 7, line 22, and col. 9, lines 7-11. The cited passages, however, refer to refining a "theme vector" (cols. 6-7) and "definitional characteristics" in a lexicon (col. 9). They do not even remotely hint at using "other terms that co-occur with the given term... separated... by no more than a predetermined number of words," as required by claim 49.

Therefore, claim 49 is believed to be patentable over the cited art, as is claim 50, which depends from claim 49. By similar reasoning, independent claims 58 and 62, which recite apparatus and a computer software product operating on principles similar to those of claim 49, are believed to be patentable, as well.

Applicant believes the amendments and remarks presented above to be fully responsive to all of the objections and grounds of rejection raised by the Examiner. In view of these amendments and remarks, all of the claims in this application are believed to be in condition for allowance. Prompt notice to this effect is requested.

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